

IAP20 Rec'd PCT/PTO 27 DEC 2005

PCT/EP2004/006825

Dr. Michael Buhr

The invention relates to a motor vehicle seat comprising a padded backrest and a padded seat.

The usual seating position of the motor vehicle driver in the vehicle causes outside rotation of the right thigh, which thus falls outwards on the right side in vehicles usual in Germany. This does not only result in discomfort in the hip joint, but also in tension in the thigh as well as the hip-pelvis and lumbar region. Furthermore, pain in the leg and obstruction of the blood circulation can occur, if the thigh contacts the centre console.

Finally, tensions in the back and static discomfort in the lumbar-pelvis region occur. In the end this results in the exhaustion of the vehicle driver and this type of exhaustion is under certain circumstances a joint cause of the so-called microsleep.

It is the object of the invention, to avoid outside rotation of the driver's thigh when driving a car. This results in more relaxed sitting position avoiding or reducing tensions in the legs and the back. This is achieved in that the seat surface has a supporting part having the shape of a bank at the boundary of the seat surface.

The seat according to the invention has a rotation support element as a bank at the right side of the drivers seat for left hand side driven cars in order to correct the position of the upper of the leg. According to a preferred embodiment the supporting part is arranged at the front area of the seat just at the height of the knee or the thigh and is ..extending from there backwards.

The supporting part being integrated in the seat or in the padding of the seat for instance by means of adjustment parts being arranged inside of the seat and being adjusted mechanically, pneumatically or electrically in order to vary the legs position individually in order to adjust the system to specific users thereof.

This problem is not addressed by any of the designs provided for known car seats.

The invention is explained below by way of example with reference to the drawing.

Fig. 1 shows a front view of a motor vehicle seat.

Fig. 2 shows a plan view of the motor vehicle seat illustrated in fig. 1.

In the figures, 10 denotes the backrest of a motor vehicle seat. The actual seat comprises a seating surface 11.

Such seats are widely known, wherein in the figures a tripartition of the backrest 10 and of the actual seat 11 is shown, such as can be found frequently in motor vehicle seats.

12 denotes a supporting part in the figures, which is attached at the boundary on the right-hand side (viewed from the driver) of the seat surface 11. It has a substantially triangular shape in cross-section, however with rounded-off portions. Viewed from above (fig. 2) it comprises substantially a kidney shape, i. e. it can taper from the edge of the surface 11 backwards, towards the backrest.

13 denotes thigh and lower leg as cylindrical parts as well as the foot region of a person, not shown as such. It can be taken from this type of illustration, especially when viewing fig. 2, that the feared outside rotation of the driver's thigh cannot occur, instead thigh and lower leg remain in oriented position with regard to each other.

The embodiment of the motor vehicle seat shown in the figures is intended for a motor car, in which the driver sits on the left-hand side of the vehicle and actuates brake and accelerator pedal with his right foot. Motor vehicles intended for left-hand traffic are correspondingly equipped with a supporting part 12 in laterally reversed manner.

At the side of the driver's seat nearer to the longitudinal axis of the motor vehicle, a raised portion situated at the edge is provided in the central to front region of the seat surface, which tapers off towards the front and the back and thus reduces or prevents, respectively, the outside rotation of the driver's thigh. This support against rotation can be designed variably (mechanically, pneumatically, hydraulically or electrically adjustable), in order to vary the position of the legs and enable an adjustment to anatomic differences between the individual car drivers thereby.